INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 H05K1/18 H05K H05K3/28 H01L33/00 H01L31/0203 According to International Patent Classification (IPC) or to both national classification and IPC **B. FIELDS SEARCHED** Minimum documentation searched (classification system followed by classification symbols) IPC 7 H05K H01L Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ, COMPENDEX, IBM-TDB C. DOCUMENTS CONSIDERED TO BE RELEVANT Category ° Relevant to claim No. Citation of document, with indication, where appropriate, of the relevant passages X US 5 677 568 A (KODAI SYOJIRO ET AL) 1,2,5,8, 14 October 1997 (1997-10-14) column 3, line 42 - column 4, line 56; figures 1-3,4a column 4, line 66 - column 5, line 5 A WO 03/032241 A (DROZ FRANCOIS; NAGRAID SA 1-11 (CH)) 17 April 2003 (2003-04-17) page 1, paragraph 3; figure 2 page 6, line 18 - page 7, line 7 Α DE 197 08 615 C (SIEMENS AG) 1-11 23 July 1998 (1998-07-23) sentence 6 - sentence 22; figure 1 FR 2 833 801 A (OBERTHUR CARD SYST SA) 1-11 Α 20 June 2003 (2003-06-20) page 5, line 7 - page 6, line 6; figure 4 Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the 'A' document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international "X" document of particular relevance; the claimed invention filing date cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-ments, such combination being obvious to a person skilled in the ort. *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed *&* document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 3 December 2004 13/12/2004 Name and mailing address of the ISA **Authorized officer** European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 Dobbs, H

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